

ABSTRACT

A method and apparatus for multicasting of a multi-packet message are disclosed. Data to be transmitted as a message are divided into N sets, each set being encoded to generate encoded data. A set of parity bits is separated from each of the N sets of encoded data. The N sets of separated parity bits are encoded by a systematic code with a predetermined distance S across the N sets, resulting in N' parity-bit packets. The N' parity-bit packets are encoded with a code that is selected so that each receiving station decodes the N' parity-bit packets with a high probability. The N -packet message, comprising the N sets of encoded data less the separated bits, and the N' packets are multicasted. If less than S packets of the N -packet message fail to decode at a receiving station, the receiving station recovers all N packets using the N' packets.